

FIG. 1

A  
ANCESTRAL TRACE FOR AMISH STUDY BIPOLAR PEDIGREES

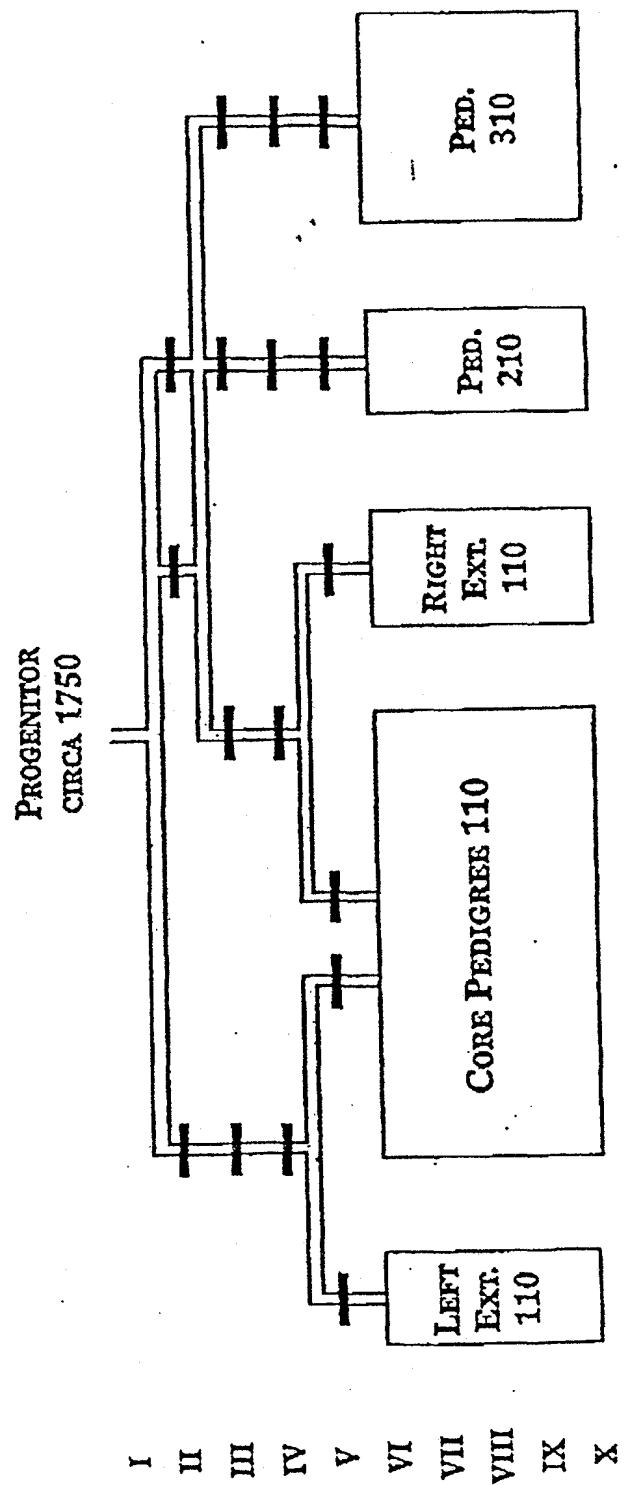
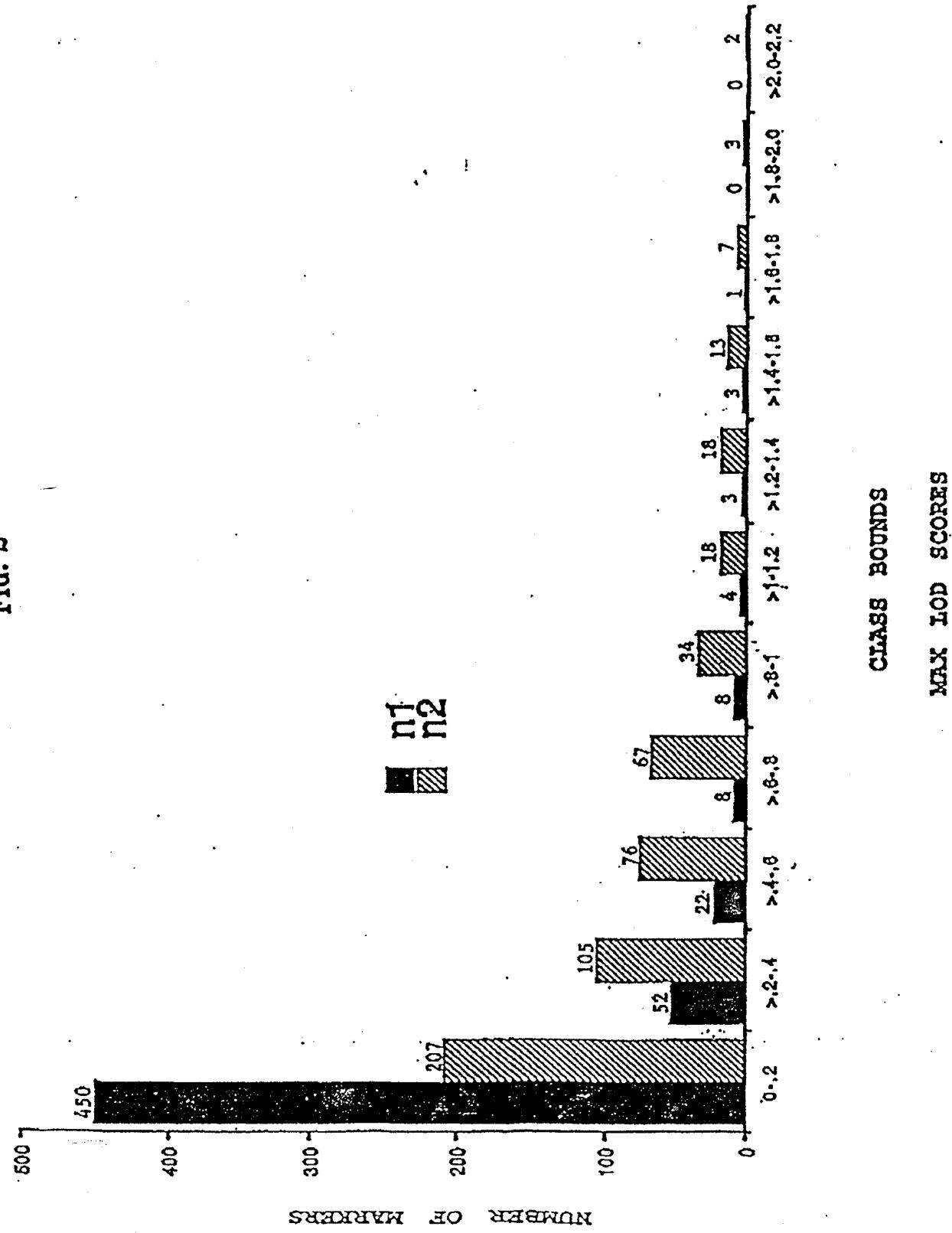
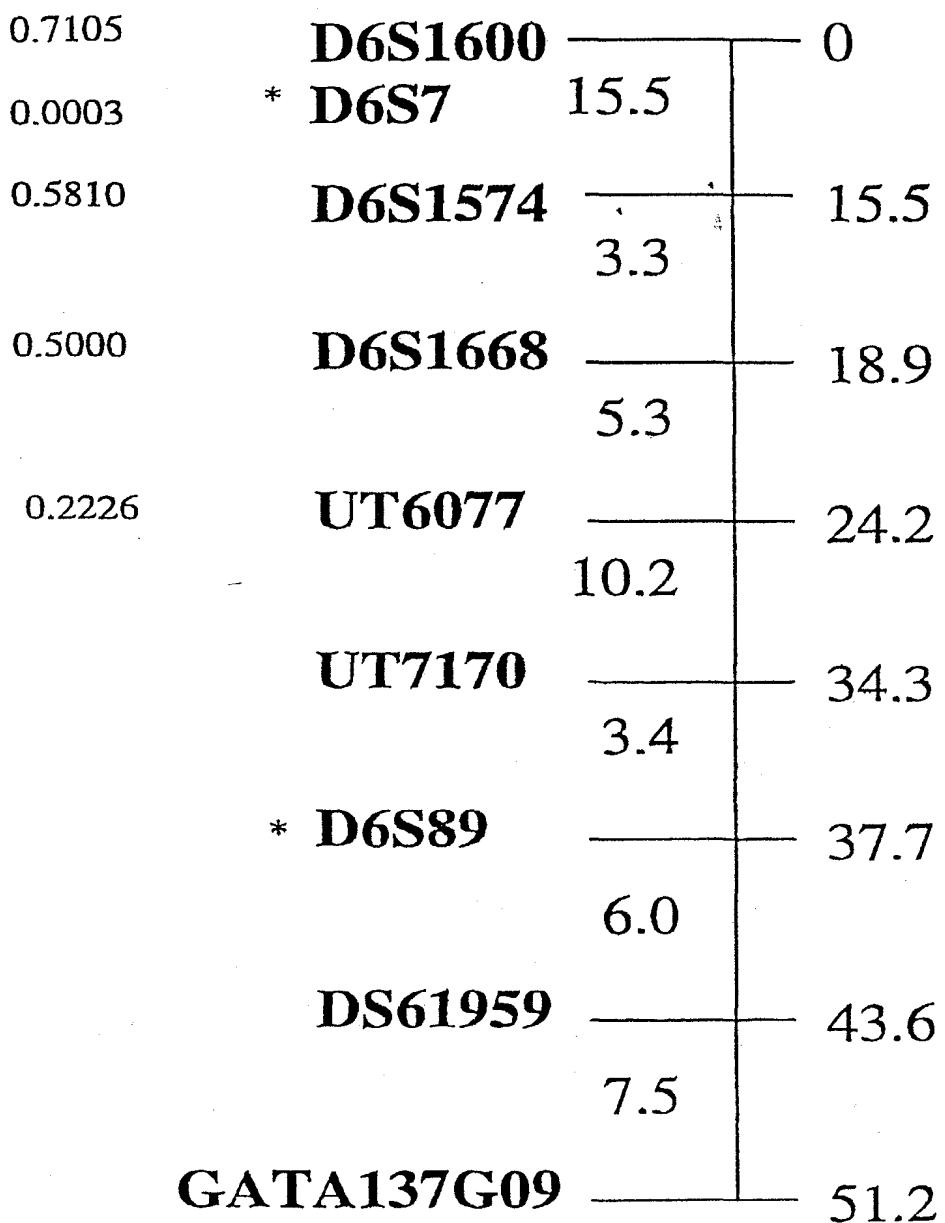


FIG. 2



**SIBPAL**

**P**



\* = NG markers/values

Figure 3

SIBPAL P

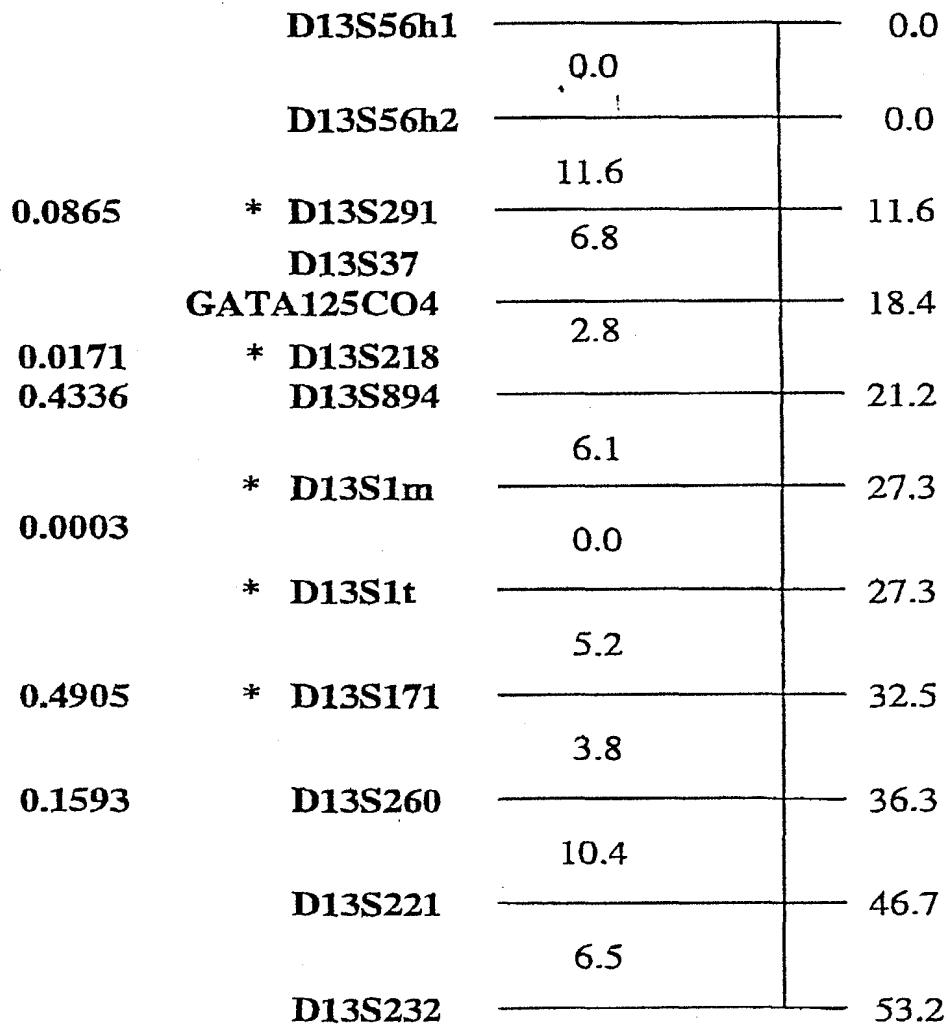


Figure 4

Inventors: Edward I. Ginns *et al.*

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SIBPAL P

	<b>D15S114</b>		0.0
0.1449	299yf	11.1	11.1
0.0411	<b>D15S131</b>	5.8	16.8
0.2091	<b>D15S153</b>	7.8	24.6
0.0114	* <b>D15S36</b>	7.6	32.2
0.0003	* <b>D15S45</b>		
0.0433	<b>D15S159</b>	1.5	
0.0217	* <b>D15S148</b>		33.6
0.1020	135yc	1.4	35.0
	<b>D15S1033</b>		
	<b>D15S150</b>	1.7	36.7
	<b>D15S38</b>	5.6	
	* <b>D15S117</b>		
	<b>GATA153F11</b>	5.1	42.3
	<b>D15S962</b>		47.4
	<b>D15S48ml</b>	1.2	
	189yc	2.4	48.6

Figure 5

SIBPAL P value

	D4S412	0.0
0.5241	D4S2935	13.6
	D4S431	1.2
	D4S431a	14.8
0.0002	D4S2366	0.9
	D4S394a	15.7
0.0015	D4S3007	1.0
0.0035	D4S394	3.2
0.0000	D4S2949	2.1
0.0626	D4S1605	9.4
0.0005	D4S1582	2.5
	D4S107m	31.3
	D4S403	0.5
	D4S419	33.8
0.0002	D4S404	7.6
0.0004	D4S391	41.9
	D4S405	6.2
		48.1
		12.1
		54.7
		66.8

Figure 6

**SIBPAL P**

	D4S100	7.4	0.0
	D4S406	3.9	7.4
	D4S1611		
	D4S101t		
	UT7739	3.7	11.4
	D4S1573	2.6	15.0
<0.0001	D4S402	1.2	17.6
0.0001	D4S109		
	D4S427	8.6	18.9
	D4S1615	8.4	27.5
	D4S2959	5.6	35.9
	D4S1576	4.5	41.5
	D4S422	1.4	46.0
	D4S2423		
	D4S422a	1.8	47.4
<0.0001	D4S175	2.6	49.2
<0.0001	D4S397		
	D4S3334	2.5	51.8
	D4S1644	3.4	54.3
	D4S192		
	D4S1565		
	UT2147	2.7	57.7
0.0003	D4S424	2.2	60.4
	D4S420		
	D4S1625		62.6
	UT1264	4.8	67.3
	D4S413	15.3	82.7

**GATA8A05**

Non-parametric LOD  
NPL  
49 HEALTH (Effector Gene )

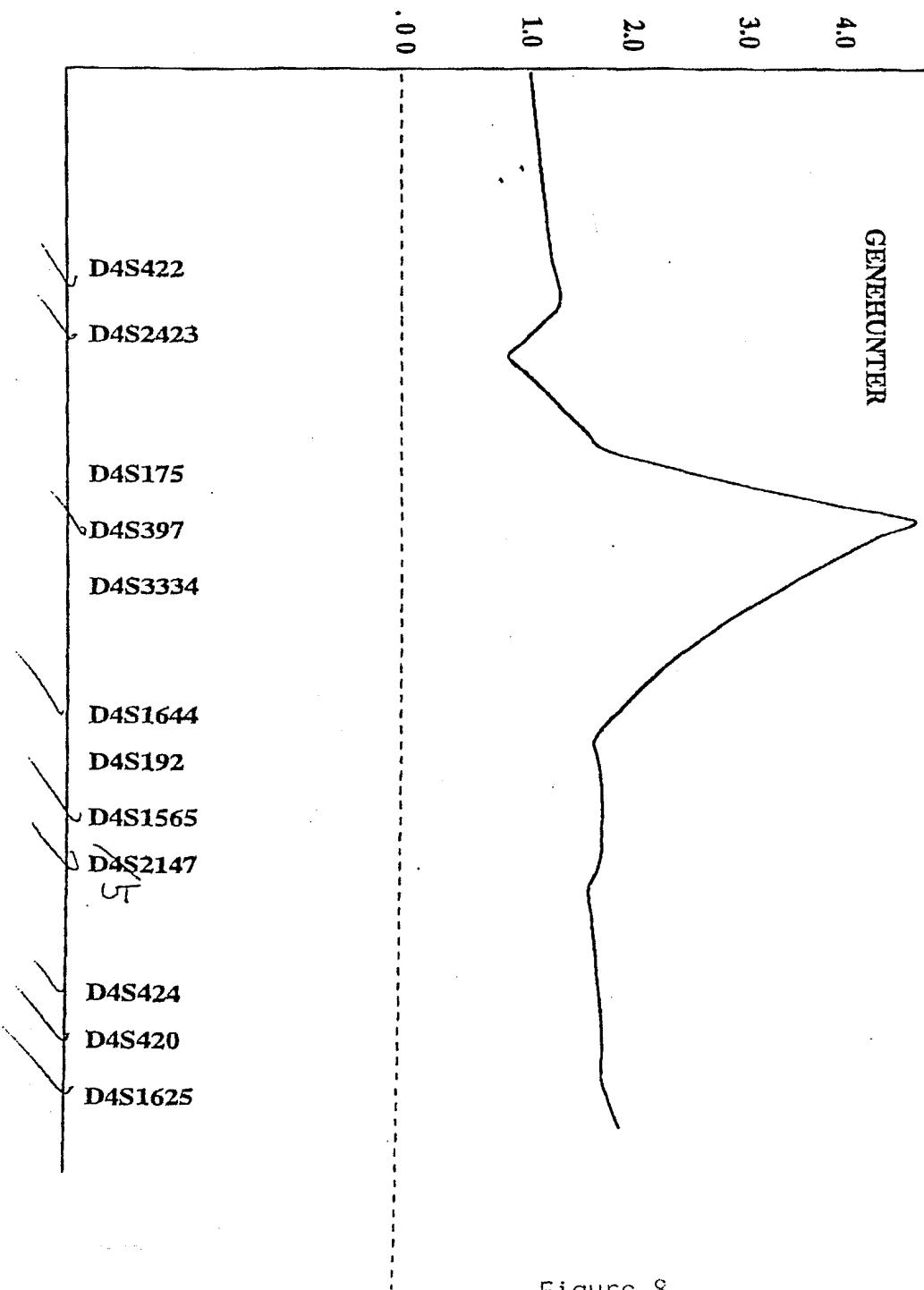


Figure 8

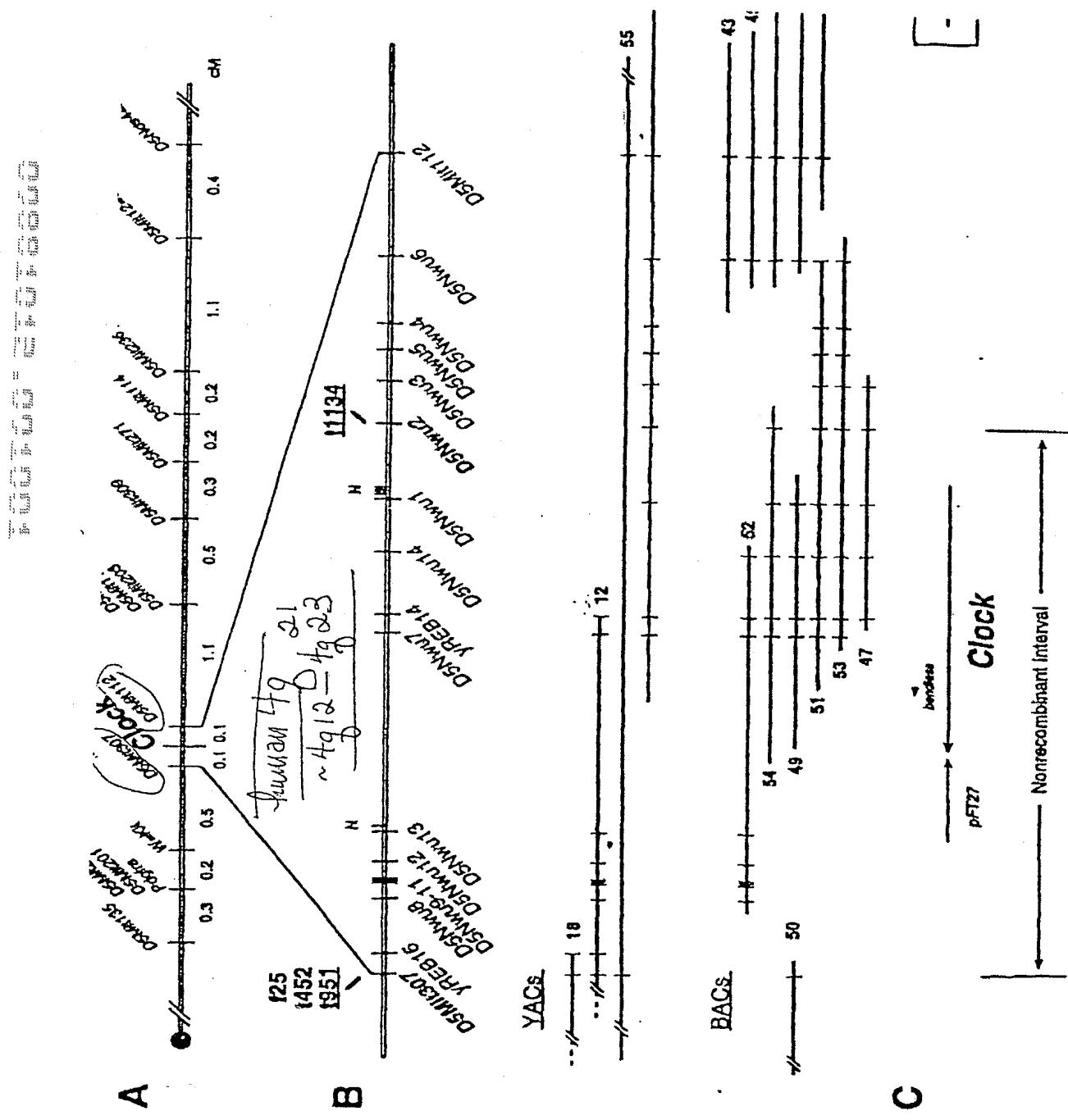


Figure 1. Genetic, Physical, and Transcription Unit Mapping of the *Clock* Locus

AMISH STUDY BIPOLEAR PEDIGREE EXTENSIONS  
PROGENITOR  
1700-1750

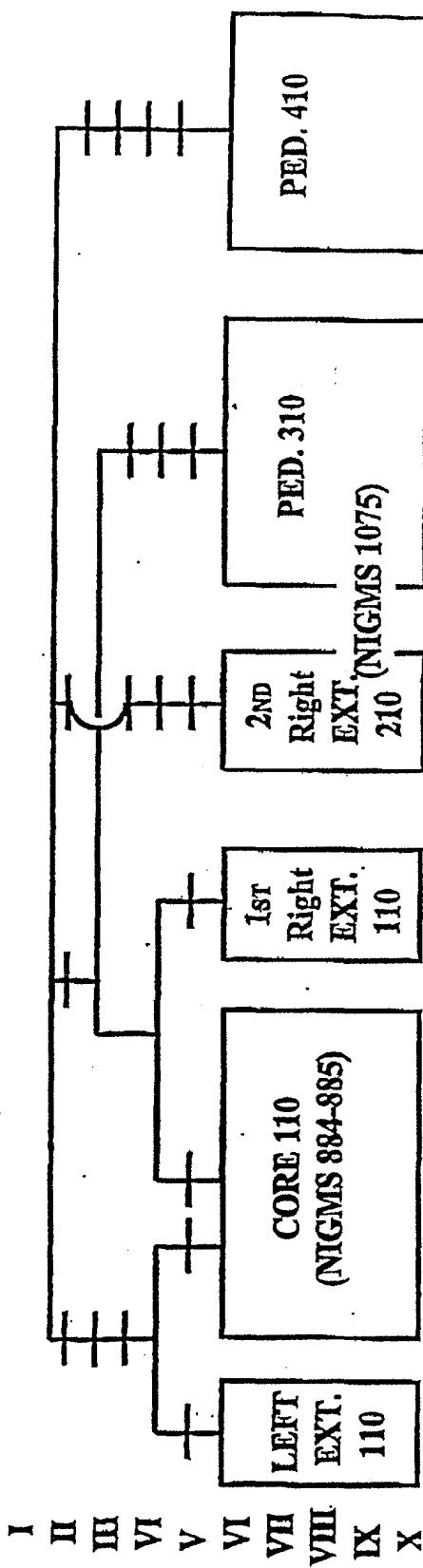


Figure 10

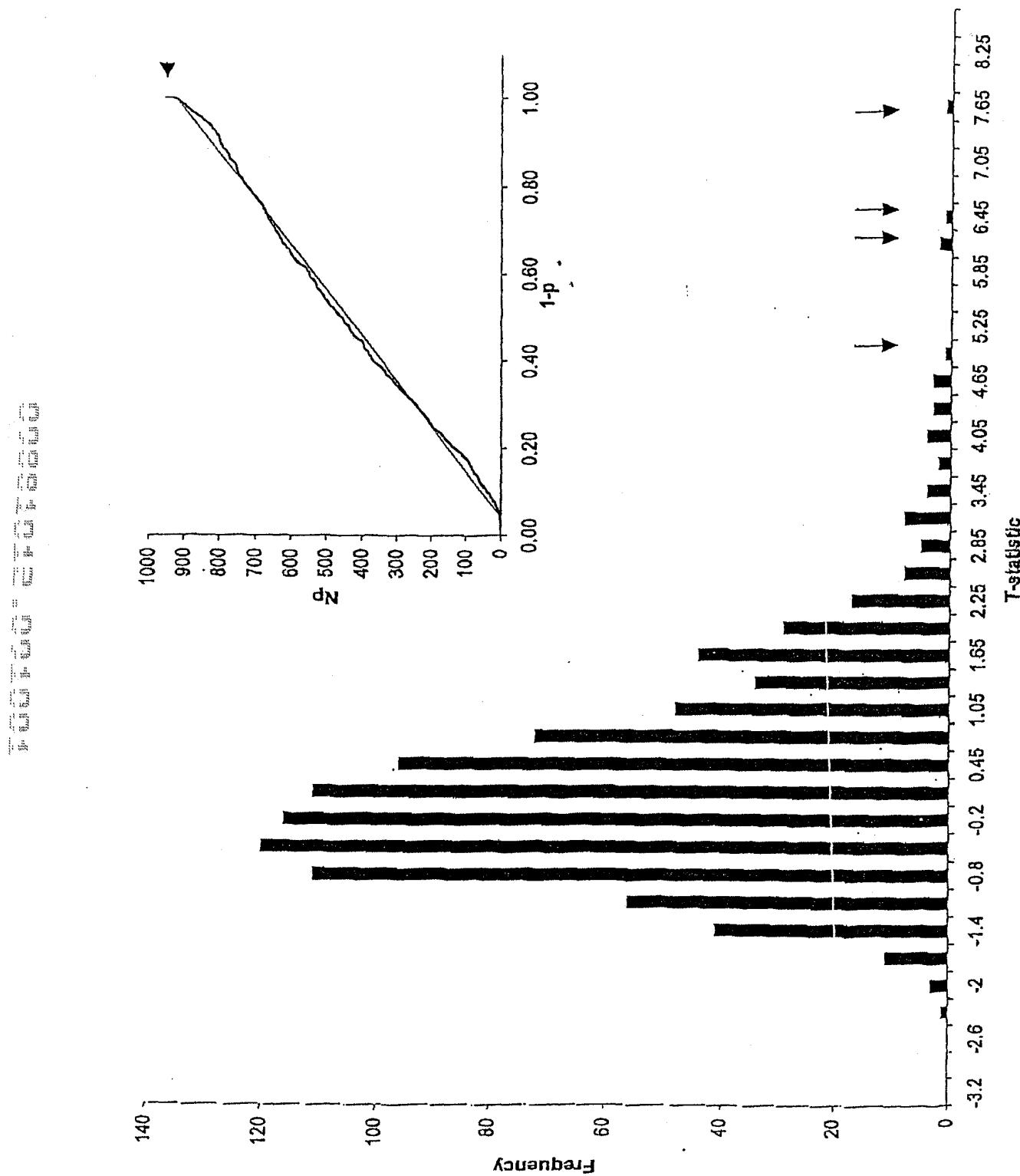


Figure 11

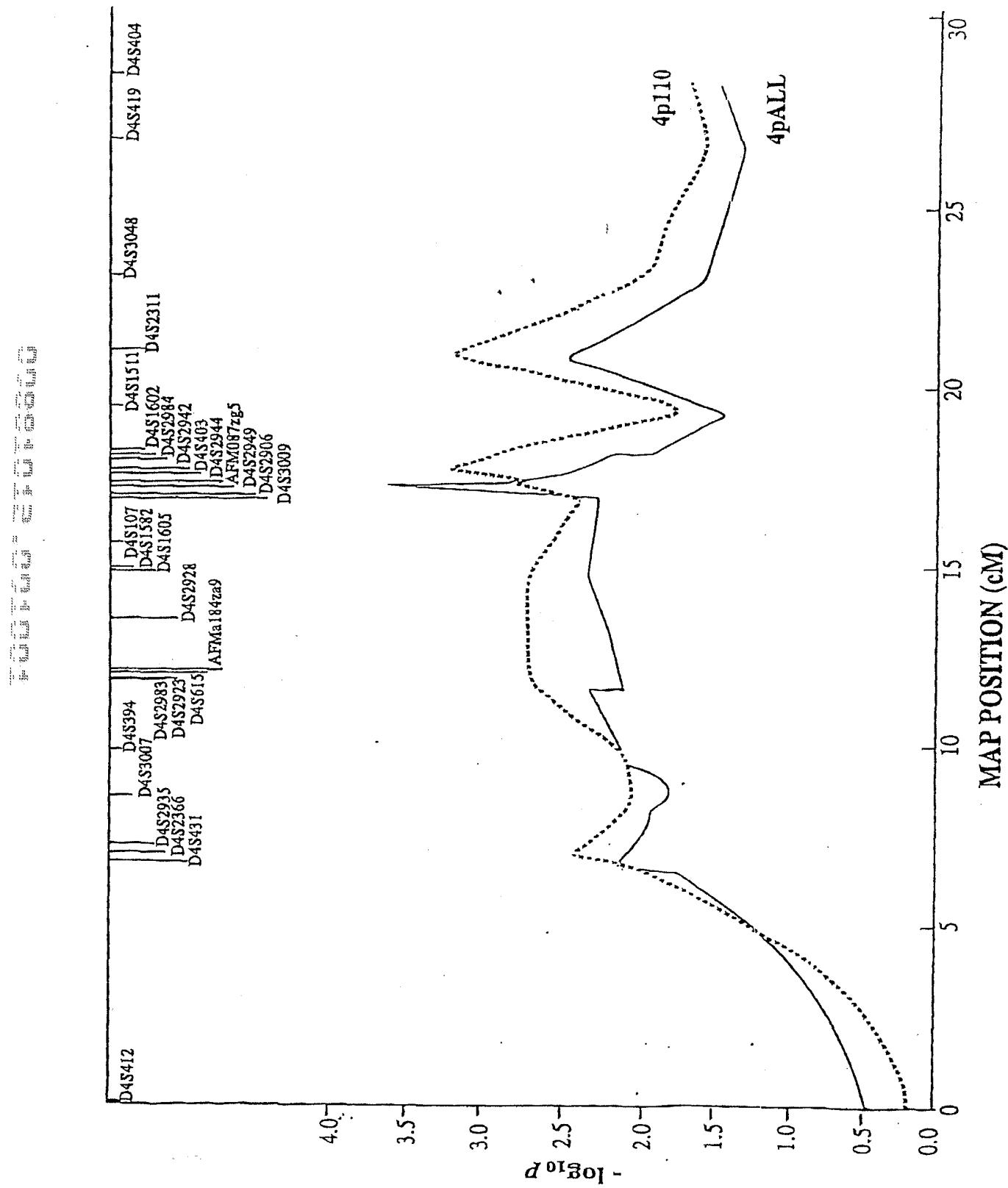


Figure 12A

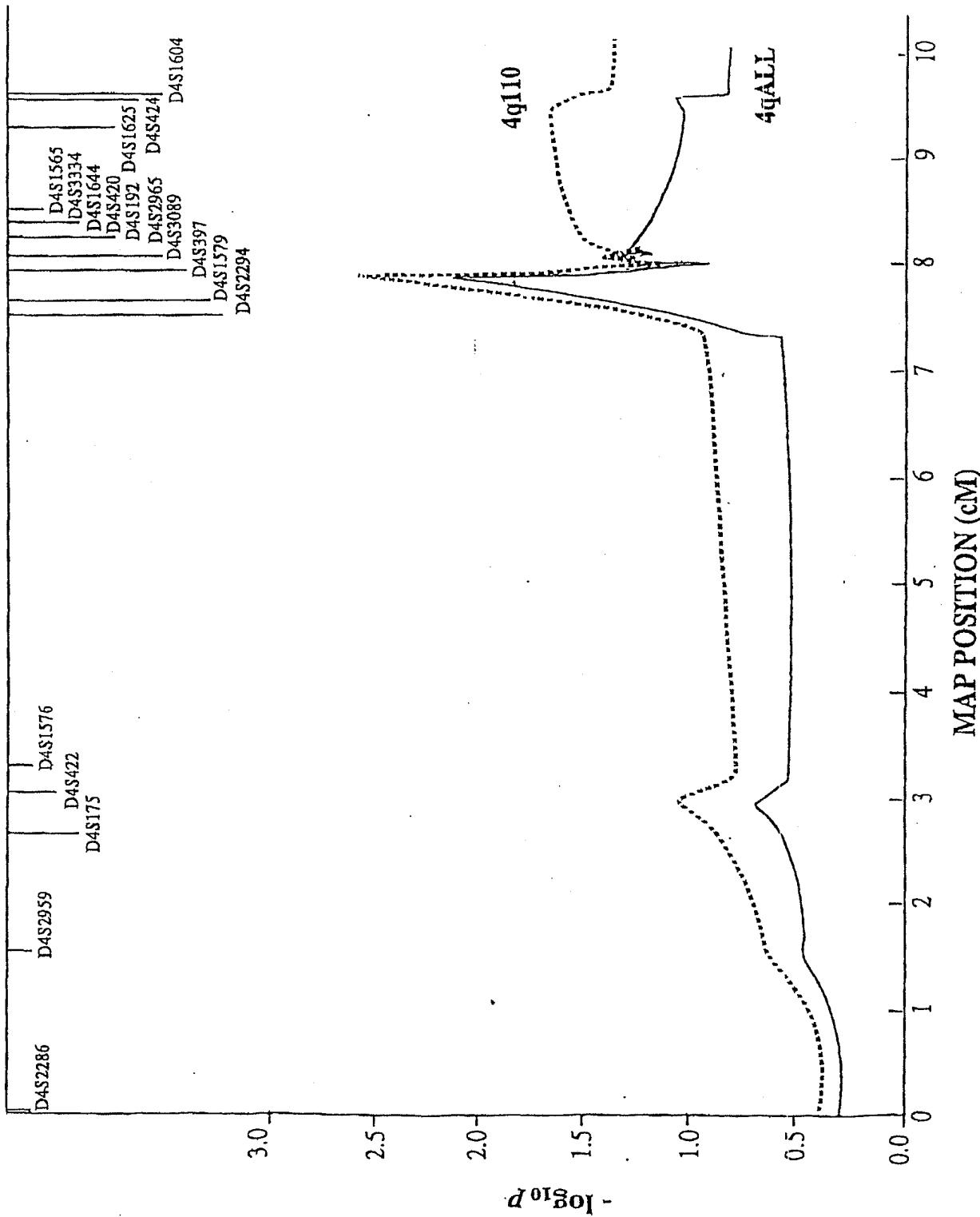


Figure 12B